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FOLEY & LARDNER LLP
150 EAST GILMAN STREET
P.O. BOX 1497
MADISON, WI 53701-1497

EXAMINER	
BEYEN, ZEWDU A	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/579,404	RIDDINGTON ET AL.	
	Examiner	Art Unit	
	ZEWDU BEYEN	2461	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 July 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12 and 38-77* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12, and 38-77* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

- This action is responsive to amendment dated 07/22/2009
- Applicant's amendments filed on 07/22/2009 has been entered and considered.
- Claims 1-12 are amended.
- Claims 13-37 are canceled
- Claims 38-77 are added.
- Claims 1-12, and 38-77, are pending.
- Claims 1-12, and 38-77, stand rejected.

Claim Rejections - 35 USC § 112

Claims 39, 48, and 69 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 39, 48, and 69 recite "TRAU frame is a generic TRAU frame" the claim language is indefinite.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 68-77, are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 68, 72, and 77 recite: "computer executable instructions". As set forth in the Interim Guideline a computer program must be stored on a computer readable medium, and computer readable medium must not include as non-transitory media such as signals or transmission. However, applicant's specification does not clearly exclude computer readable medium as non-transitory media such as signals or transmission media. Thus, claims 68-77 are non-statutory for the aforementioned reason.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9-11, 61, 72, 46, 62, 63, 67, 73, and 76 are rejected under 35 U.S.C. 102(b) as being anticipated by DeMartin to **(US6421527)**

Regarding claim 9, 61, and 72 DeMartin teaches determining a coding type for

a speech signal via a converter**(col.4 lines 27-31 and col.4 lines 37-39 discloses the channel encoded information 21b, the codec mode header 21a and beacon bit 21c are sent in the frame 21, and The receiver recognizes the header 21b 3-bit (repetition code for example) code and knows the codec mode to use for the frame)**;

locating, via the converter, a set of bits corresponding to each transport channel of a plurality of transport channels based on the coding type**(col.4 lines 9-20 discloses Speech bits are divided into classes of decreasing perceptual importance. Each class is then encoded with convolutional codes of appropriate rate (including, possibly, rate 1, i.e., no protection). The first class, Class 0, includes the most important bits. Furthermore , col.4 lines 37-39 discloses The receiver recognizes the header 21b 3-bit (repetition code for example) code and knows the codec mode to use for the frame)**;

decoding the plurality Of transport channels based on the corresponding set of bits in accordance with the determined coding type**(col.4 lines 27-31 and col.4 lines 37-39 discloses the channel encoded information 21b, the codec mode header 21a and beacon bit 21c are sent in the frame 21, and The receiver recognizes the header 21b 3-bit (repetition code for example) code and knows the codec mode to use for the frame)**.

Regarding claim 10, DeMartin teaches locating error check bits associated with a first transport channel of the plurality of transport channels; and of based on the located error check bits, error checking the first transport channel**(col.4 lines 9-20 discloses Each class is then encoded with convolutional codes of**

appropriate rate (including, possibly, rate 1, i.e., no protection). The first class, Class 0, includes the most important bits the bits are protected by a Cyclic Redundancy Code (CRC) parity check. A CRC parity check is computed over the bits of Class 0 to detect any error at the receiver).

Regarding claim 11, DeMartin teaches wherein the method includes the step of locating a set of control bits, said control bits including an indication of the coding type of the speech signal**(col.4 lines 27-31 and col.4 lines 37-39 discloses the channel encoded information 21b, the codec mode header 21a and beacon bit 21c are sent in the frame 21, and The receiver recognizes the header 21b 3-bit (repetition code for example) code and knows the codec mode to use for the frame)**

Regarding claim 46, DeMartin teaches wherein the step of decoding comprises mapping each located set of bits into a required format associated with the coding type**(col.4 lines 27-31 and col.4 lines 37-39 discloses the channel encoded information 21b, the codec mode header 21a and beacon bit 21c are sent in the frame 21, and The receiver recognizes the header 21b 3-bit (repetition code for example) code and knows the codec mode to use for the frame)**.

Regarding claim 62, DeMartin teaches 61, wherein the converter is further configured to:locate error check bits associated with a first transport channel of the plurality of transport channels; and

based on the located error check bits, error Check the first transport channel**(col.4 lines 9-20 discloses Each class is then encoded with**

convolutional codes of appropriate rate (including, possibly, rate 1, i.e., no protection). The first class, Class 0, includes the most important bits the bits are protected by a Cyclic Redundancy Code (CRC) parity check. A CRC parity check is computed over the bits of Class 0 to detect any error at the receiver).

Regarding claim 63, DeMartin teaches wherein the converter is further configured to locate a set of control bits, wherein the set of control bits include an indication of the coding type of the speech signal**(col.4 lines 27-31 and col.4 lines 37-39 discloses the channel encoded information 21b, the codec mode header 21a and beacon bit 21c are sent in the frame 21, and The receiver recognizes the header 21b 3-bit (repetition code for example) code and knows the codec mode to use for the frame)**.

Regarding claim 67, DeMartin teaches wherein the converter is further configured to map each located set of bits into a required format associated with the coding type**(col.4 lines 27-31 and col.4 lines 37-39 discloses the channel encoded information 21b, the codec mode header 21a and beacon bit 21c are sent in the frame 21, and The receiver recognizes the header 21b 3-bit (repetition code for example) code and knows the codec mode to use for the frame)**.

Regarding claim 73, DeMartin teaches wherein the instructions cause the computing device to perform a method further comprising:

locating error check bits associated with a first transport channel of the plurality of transport channels**(col.4 lines 9-20 discloses Speech bits are divided into**

classes of decreasing perceptual importance);; and

based on the located error check bits, error checking the first transport channel**(col.4 lines 9-20 discloses Each class is then encoded with convolutional codes of appropriate rate (including, possibly, rate 1, i.e., no protection). The first class, Class 0, includes the most important bits the bits are protected by a Cyclic Redundancy Code (CRC) parity check. A CRC parity check is computed over the bits of Class 0 to detect any error at the receiver)**.

Regarding claim 76, DeMartin teaches wherein the instructions cause the .computing device to perform a method further comprising mapping each located set of bits into a required format associated with the coding type**(col.4 lines 27-31 and col.4 lines 37-39 discloses the channel encoded information 21b, the codec mode header 21a and beacon bit 21c are sent in the frame 21, and The receiver recognizes the header 21b 3-bit (repetition code for example) code and knows the codec mode to use for the frame)**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-4,6-8,38-42,47,48-54, 57-60,68-71, and 77, are rejected under 35 U.S.C. 103(a) as being unpatentable over DeMartin to **(US6421527),** in view of Niemela to **(US20020003783)**

Regarding claims 1, 47, 68, and 77 DeMartin teaches determining a coding type for a speech signal (**col.4 lines 27-31 and col.4 lines 37-39 discloses the channel encoded information 21b, the codec mode header 21a and beacon bit 21c are sent in the frame 21, and The receiver recognizes the header 21b 3-bit (repetition code for example) code and knows the codec mode to use for the frame)**

determining a set of bits associated with each transport channel of at least two transport channels corresponding to the speech signal **(col.4 lines 9-20 discloses Speech bits are divided into classes of decreasing perceptual importance. Each class is then encoded with convolutional codes of appropriate rate (including, possibly, rate 1, i.e., no protection). The first**

class, Class 0, includes the most important bits)

determining a priority for each set of bits associated with each transport channel via the TRAU**(col.4 lines 9-20 discloses Each class is then encoded with convolutional codes of appropriate rate (including, possibly, rate 1, i.e., no protection). The first class, Class 0, includes the most important bits)**

DeMartin does not explicitly teach a transcoder and ' rate adaptor unit (TRAU) and inserting into a TRAU frame, via the TRAU, each set of bits according to the determined priority of each set of bits

However, Niemela teaches a transcoder and ' rate adaptor unit (TRAU) and inserting into a TRAU frame, via the TRAU, each set of bits according to the determined priority of each set of bits **([0066] discloses TRAU (Transcoder and Rate Adapter Unit) frames formed for transcoding. In circuit-switched speech transfer, 260 bits containing 20 ms of speech are coded at the subscriber terminal 150 such that the most important 50 class Ia bits and 132 class Ib bits are convolution-coded. In addition, error correction bits are added to these bits, which gives a total of 378 bits. Then, 78 class II bits of less importance are added to these 378 bits. This gives a total of 456 bits, which, in principle, would fit in four radio bursts)**

Therefore it would have been obvious to one ordinarily skilled in the art at the time the invention was made to enable the system of DeMartin include a

transcoder and ' rate adaptor unit (TRAU) and inserting into a TRAU frame, via the TRAU, each set of bits according to the determined priority of each set of bits, as suggested by Niemela. This modification would benefit the system to efficiently support flexible transmission capacity.

Regarding claim 2, DeMartin teaches determining if error checking is required for one or more of the at least two transport channel associated computing error check bits for each transport channel that requires error checking; **(col.4 lines 9-20 discloses Speech bits are divided into classes of decreasing perceptual importance)** and

inserting into the TRAU frame the computed error check bits associated with each transport channel that requires error checking after ~~the set o~~f bits associated with that channel **(col.4 lines 9-20 discloses Each class is then encoded with convolutional codes of appropriate rate (including, possibly, rate 1, i.e., no protection). The first class, Class 0, includes the most important bits the bits are protected by a Cyclic Redundancy Code (CRC) parity check. A CRC parity check is computed over the bits of Class 0 to detect any error at the receiver).**

Regarding claim 3, DeMartin teaches of inserting control bits into said TRAU frame**(col.4 lines 27-31 and col.4 lines 37-39 discloses the channel encoded information 21b, the codec mode header 21a and beacon bit 21c are sent in the frame 21, and The receiver recognizes the header 21b 3-bit (repetition code for example) code and knows the codec mode to use for the frame)**.

Regarding claim 4, DeMartin teaches, wherein the control bits are inserted a reserved location in the TRAU frame**(col.4 lines 27-31 and col.4 lines 37-39 discloses the channel encoded information 21b, the codec mode header 21a and beacon bit 21c are sent in the frame 21, and The receiver recognizes the header 21b 3-bit (repetition code for example) code and knows the codec mode to use for the frame)**

Regarding claim 6, DeMartin teaches wherein the at least twotransport channels comprise in a set of class A bits associated with a first transport channel and a set of class B bits associated with a second transport channel, **(col.4 lines 9-20 discloses Speech bits are divided into classes of decreasing perceptual importance)** wherein at least a portion of the class A bits comprises a set of cyclic redundancy check bits associated with a cyclic redundancy check, all the class and wherein the TRAU frame includes including, in sequence, the set of class A bits, the set of cyclic redundancy check bits, and the set of Class B bits**(col.4 lines 9-20 discloses Each class is then encoded with convolutional codes of appropriate rate (including, possibly, rate 1, i.e., no protection). The first class, Class 0, includes the most important bits the bits are protected by a Cyclic Redundancy Code (CRC) parity check. A CRC parity check is computed over the bits of Class 0 to detect any error at the receiver).**

Regarding claim 7, A method according to claim 6: wherein the TRAU frame comprises an initial set of control bits**(col.4 lines 27-31 and col.4 lines 37-39**

discloses the channel encoded information 21b, the codec mode header 21a and beacon bit 21c are sent in the frame 21, and The receiver recognizes the header 21b 3-bit (repetition code for example) code and knows the codec mode to use for the frame)

Regarding claim 8, DeMartin teaches wherein the set of cyclic redundancy bits are compiled based on at least one control bit**(col.4 lines 9-20 discloses Class 0, includes the most important bits. On the up-link frame, the bits are protected by a Cyclic Redundancy Code (CRC) parity check)**

Regarding claim 38, DeMartin teaches wherein the step of inserting comprises inserting a higher priority set of bits into the TRAU frame before inserting a lower priority set of bits into the TRAU frame**(col.4 lines 9-20 discloses Speech bits are divided into classes of decreasing perceptual importance)**.

Regarding claim 40, DeMartin teaches, further comprising encoding the speech signal to generate a plurality of speech coefficients **(col.6 lines 39-44 discloses generating coefficients).**

Regarding claim 41, DeMartin teaches 3, wherein the control bits comprise at least one of an indication of a number of transport channels included in the TRAU frame, a location in the TRAU frame of each set of bits associated with each transport channel, **(col.4 lines 9-20 discloses Speech bits are divided into classes of decreasing perceptual importance)** an indication of if error checking applies to the sets of bits inserted in the TRAU frame, and a location in the TRAU frame of error checking information if error checking applies**(col.4 lines 9-20 discloses Each class is then encoded with convolutional codes**

of appropriate rate (including, possibly, rate 1, i.e., no protection). The first class, Class 0, includes the most important bits the bits are protected by a Cyclic Redundancy Code (CRC) parity check. A CRC parity check is computed over the bits of Class 0 to detect any error at the receiver).

Regarding claim 42, DeMartin teaches wherein the transport format combination indicator indicates the coding type**(col.4 lines 27-31 and col.4 lines 37-39 discloses the channel encoded information 21b, the codec mode header 21a and beacon bit 21c are sent in the frame 21, and The receiver recognizes the header 21b 3-bit (repetition code for example) code and knows the codec mode to use for the frame)**.

Regarding claim 49, DeMartin teaches 47, further comprising a codec configured to encode a signal**(col.4 lines 27-31 and col.4 lines 37-39 discloses the channel encoded information 21b, the codec mode header 21a and beacon bit 21c are sent in the frame 21, and The receiver recognizes the header 21b 3-bit (repetition code for example) code and knows the codec mode to use for the frame)**.

Regarding claim 50, DeMartin teaches claim 49, wherein the codec is further configured to generate a plurality of speech coefficients**(col.6 lines 39-44 discloses generating coefficients)**..

Regarding claim 51, DeMartin teaches 47, wherein the converter is further configured to insert a higher priority set of bits into the TRAU frame before inserting a lower priority set of bits into the TRAU frame**(col.4 lines 9-20 discloses Speech bits are divided into classes of decreasing perceptual**

importance).

Regarding claim 52, DeMartin teaches 47, wherein the converter is further configured to: determine if error checking is required for a transport channel of the at least two transport channels**(col.4 lines 9-20 discloses Speech bits are divided into classes of decreasing perceptual importance)**;

compute error check bits for each transport channel that requires error checking **(col.4 lines 9-20 discloses Each class is then encoded with convolutional codes of appropriate rate (including, possibly, rate 1, i.e., no protection). The first class, Class 0, includes the most important bits the bits are protected by a Cyclic Redundancy Code (CRC) parity check. A CRC parity check is computed over the bits of Class 0 to detect any error at the receiver)** and insert in the TRAU frame the computed error check bits associated with each transport channel that requires error checking (**col.4 lines 9-20 discloses Each class is then encoded with convolutional codes of appropriate rate (including, possibly, rate 1, i.e., no protection). The first class, Class 0, includes the most important bits the bits are protected by a Cyclic Redundancy Code (CRC) parity check. A CRC parity check is computed over the bits of Class 0 to detect any error at the receiver)**.

Regarding claim 53, DeMartin teaches wherein the converter is further configured to insert control bits into the TRAU frame**(col.4 lines 27-31 and col.4 lines 37-39 discloses the channel encoded information 21b, the codec mode header 21a and beacon bit 21c are sent in the frame 21, and The receiver recognizes the header 21b 3-bit (repetition code for example) code**

and knows the codec mode to use for the frame).

Regarding claim 54, DeMartin teaches claim 53, wherein the control bits are inserted at a reserved location in the TRAU frame**(col.4 lines 27-31 and col.4 lines 37-39 discloses the channel encoded information 21b, the codec mode header 21a and beacon bit 21c are sent in the frame 21, and The receiver recognizes the header 21b 3-bit (repetition code for example) code and knows the codec mode to use for the frame)**.

Regarding claim 57, DeMartin teaches (New) A TRAU according to claim 53, wherein the control bits comprise at least one of an indication of a number of transport channels included in the TRAU frame, a location in the TRAU frame of each set of bits associated with each transport channel, **(col.4 lines 9-20 discloses Speech bits are divided into classes of decreasing perceptual importance)** an indication of if error checking applies to the sets of bits inserted in the TRAU frame, and a location in the TRAU frame of error checking information if error checking applies**(col.4 lines 9-20 discloses Each class is then encoded with convolutional codes of appropriate rate (including, possibly, rate 1, i.e., no protection). The first class, Class 0, includes the most important bits the bits are protected by a Cyclic Redundancy Code (CRC) parity check. A CRC parity check is computed over the bits of Class 0 to detect any error at the receiver)**.

Regarding claim 58, DeMartin teaches wherein the at least twotransport channels comprise in a set of class A bits associated with a first transport channel and a set of class B bits associated with a second transport channel,

(col.4 lines 9-20 discloses Speech bits are divided into classes of decreasing perceptual importance) wherein at least a portion of the class A bits comprises a set of cyclic redundancy check bits associated with a cyclic redundancy check, all the class and wherein the TRAU frame includes including, in sequence, the set of class A bits, the set of cyclic redundancy check bits, and the set of Class B bits**(col.4 lines 9-20 discloses Each class is then encoded with convolutional codes of appropriate rate (including, possibly, rate 1, i.e., no protection). The first class, Class 0, includes the most important bits the bits are protected by a Cyclic Redundancy Code (CRC) parity check. A CRC parity check is computed over the bits of Class 0 to detect any error at the receiver).**

Regarding claim 59, DeMartin teaches claim 58, wherein the TRAU frame comprises an initial set of control bits**(col.4 lines 27-31 and col.4 lines 37-39 discloses the channel encoded information 21b, the codec mode header 21a and beacon bit 21c are sent in the frame 21, and The receiver recognizes the header 21b 3-bit (repetition code for example) code and knows the codec mode to use for the frame)**.

Regarding claim 60, DeMartin teaches wherein the set of cyclic redundancy bits are compiled based on at least one control bit**(col.4 lines 9-20 discloses Class 0, includes the most important bits. On the up-link frame, the bits are protected by a Cyclic Redundancy Code (CRC) parity check)**.

Regarding claim 70, DeMartin teaches wherein the step of inserting further comprises inserting a higher priority set of bits into the TRAU frame before

inserting a lower priority set of bits into the TRAU frame**(col.4 lines 9-20 discloses Speech bits are divided into classes of decreasing perceptual importance)**.

Regarding claim 71, DeMartin teaches wherein the instructions cause the computing device to perform a method further comprising:

determining if error checking is required for a transport channel of the at least two transport channels**(col.4 lines 9-20 discloses Speech bits are divided into classes of decreasing perceptual importance)**;

computing error check bits for each transport channel that requires error checking**(col.4 lines 9-20 discloses Each class is then encoded with convolutional codes of appropriate rate (including, possibly, rate 1, i.e., no protection). The first class, Class 0, includes the most important bits the bits are protected by a Cyclic Redundancy Code (CRC) parity check. A CRC parity check is computed over the bits of Class 0 to detect any error at the receiver)**; and inserting in the TRAU frame the computed error check bits associated with each transport channel that requires error checking**(col.4 lines 9-20 discloses Each class is then encoded with convolutional codes of appropriate rate (including, possibly, rate 1, i.e., no protection). The first class, Class 0, includes the most important bits the bits are protected by a Cyclic Redundancy Code (CRC) parity check. A CRC parity check is computed over the bits of Class 0 to detect any error at the receiver)**.

Regarding claims 39, 48, and 69, DeMartin does not explicitly teaches wherein the TRAU frame is a generic TRAU frame

However, Niemela teaches wherein the TRAU frame is a generic TRAU frame **([0066] discloses TRAU frame).**

Therefore it would have been obvious to one ordinarily skilled in the art at the time the invention was made to enable the system of DeMartin wherein the TRAU frame is a generic TRAU frame, as suggested by Niemela. This modification would benefit the system to efficiently support flexible transmission capacity.

Claims 5, 55, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeMartin, and Niemela, further in view of Honkasalo to (US6636497).

Regarding claims 5, and 55the combination of DeMartin, and Niemela does not explicitly teach control bits that include a transport format combination indicator.

However, Honkasalo teaches control bits that include a transport format combination indicator (**co1.9 lines 37-39 discloses a transport format indicator (it can also be called rate indicator or transport format combination indicator) that is used to indicate the mixture of services used in the frame)**

Therefore it would have been obvious to one ordinary skill in the art at the time the invention was made to include a transport format combination indicator in the system of the combination of DeMartin, and Niemela does not explicitly

teach, as suggested by Honkasalo. This modification would benefit the system of the combination as a design choice.

Regarding claim 56, DeMartin teaches wherein the transport format combination indicator indicates the coding type**(col.4 lines 27-31 and col.4 lines 37-39 discloses the channel encoded information 21b, the codec mode header 21a and beacon bit 21c are sent in the frame 21, and The receiver recognizes the header 21b 3-bit (repetition code for example) code and knows the codec mode to use for the frame)**.

Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over DeMartin, and Niemela, further in view of Bender to **(US20030133494)**

Regarding claim 43, the combination of DeMartin, and Niemela does not explicitly teach wherein the TRAU frame is configured via a configuration message used to configure a flexible layer one protocol

However, Bender teaches the TRAU frame is configured via a configuration message used to configure a flexible layer one protocol **([0120] discloses sending and receiving configuration message to configure layer and protocol).**

Therefore it would have been obvious to one ordinarily skilled in the art at the time the invention was made to enable the system of the combination of DeMartin, and Niemela TRAU frame is configured via a configuration message used to configure a flexible layer one protocol, as suggested by Bender. This modification would benefit the system of the combination to efficiently configure its layer and protocol.

Claims 12, and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeMartin, in view of Honkasalo to (US6636497).

Regarding claims 12, and 64 DeMartin does not teach control bits that include a transport format combination indicator.

However, Honkasalo teaches control bits that include a transport format combination indicator (**co1.9 lines 37-39 discloses a transport format indicator (it can also be called rate indicator or transport format combination indicator) that is used to indicate the mixture of services used in the frame)**

Therefore it would have been obvious to one ordinary skill in the art at the time the invention was made to include a transport format combination indicator

in the system of DeMartin, as suggested by Honkasalo. This modification would benefit the system of DeMartin as a design choice.

Claims 44-45, 65-66, and 74-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeMartin, in view of Niemela to **(US20020003783)**

Regarding claim 44, DeMartin does not explicitly teaches receiving a generic TRAU frame at a mobile station

However, Niemela teaches receiving a generic TRAU frame at a mobile station**([0066] discloses TRAU frame).**

Therefore it would have been obvious to one ordinarily skilled in the art at the time the invention was made to enable the system of DeMartin receiving a generic transcoder and rate adaptor unit (TRAU) frame, as suggested by Niemela. This modification would benefit the system to efficiently support flexible transmission capacity.

Regarding claim 45, DeMartin does not explicitly teaches locating comprises locating the set of bits within the generic TRAU frame

However, Niemela teaches locating comprises locating the set of bits within the generic TRAU frame **([0066] discloses TRAU (Transcoder and Rate Adapter Unit) frames formed for transcoding. In circuit-switched speech transfer, 260 bits containing 20 ms of speech are coded at the subscriber**

terminal 150 such that the most important 50 class Ia bits and 132 class Ib bits are convolution-coded. In addition, error correction bits are added to these bits, which gives a total of 378 bits. Then, 78 class II bits of less importance are added to these 378 bits. This gives a total of 456 bits, which, in principle, would fit in four radio bursts).

Therefore it would have been obvious to one ordinarily skilled in the art at the time the invention was made to enable the system of DeMartin locating each set of bits within the generic TRAU frame, as suggested by Niemela. This modification would benefit the system to efficiently support flexible transmission capacity.

Regarding claim 65, DeMartin does not explicitly teaches receive a generic TRAU frame

However, Niemela teaches receive a generic TRAU frame **([0066] discloses TRAU frame).**

Therefore it would have been obvious to one ordinarily skilled in the art at the time the invention was made to enable the system of DeMartin receiving a generic transcoder and rate adaptor unit (TRAU) frame, as suggested by Niemela. This modification would benefit the system to efficiently support flexible transmission capacity.

Regarding claim 66, DeMartin does not explicitly teaches locating comprises locating the set of bits within the generic TRAU frame

However, Niemela teaches locate each set of bits within the generic TRAU frame**([0066] discloses TRAU (Transcoder and Rate Adapter Unit) frames formed for transcoding. In circuit-switched speech transfer, 260 bits containing 20 ms of speech are coded at the subscriber terminal 150 such that the most important 50 class Ia bits and 132 class Ib bits are convolution-coded. In addition, error correction bits are added to these bits, which gives a total of 378 bits. Then, 78 class II bits of less importance are added to these 378 bits. This gives a total of 456 bits, which, in principle, would fit in four radio bursts)**.

Therefore it would have been obvious to one ordinarily skilled in the art at the time the invention was made to enable the system of DeMartin locating each set of bits within the generic TRAU frame, as suggested by Niemela. This modification would benefit the system to efficiently support flexible transmission capacity.

Regarding claim 74, DeMartin does not explicitly teaches receive a generic TRAU frame

However, Niemela teaches receiving a generic transcoder and rate adaptor unit (TRAU) frame**([0066] discloses TRAU frame).**

Therefore it would have been obvious to one ordinarily skilled in the art at the time the invention was made to enable the system of DeMartin receiving a generic transcoder and rate adaptor unit (TRAU) frame, as suggested by

Niemela. This modification would benefit the system to efficiently support flexible transmission capacity.

Regarding claim 75, DeMartin does not explicitly teaches locating comprises locating the set of bits within the generic TRAU frame

However, Niemela teaches locating each set of bits within the generic TRAU frame**([0066] discloses TRAU (Transcoder and Rate Adapter Unit) frames formed for transcoding. In circuit-switched speech transfer, 260 bits containing 20 ms of speech are coded at the subscriber terminal 150 such that the most important 50 class Ia bits and 132 class Ib bits are convolution-coded. In addition, error correction bits are added to these bits, which gives a total of 378 bits. Then, 78 class II bits of less importance are added to these 378 bits. This gives a total of 456 bits, which, in principle, would fit in four radio bursts)**

Therefore it would have been obvious to one ordinarily skilled in the art at the time the invention was made to enable the system of DeMartin locating each set of bits within the generic TRAU frame, as suggested by Niemela. This modification would benefit the system to efficiently support flexible transmission capacity.

Response to Argument

Applicant's arguments with respect to claims 1, and 9, have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ZEWDU BEYEN whose telephone number is (571)270-7157. The examiner can normally be reached on Monday thru Friday, 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 1-571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information

for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Z. B./

Examiner, Art Unit 2461

/Huy D Vu/

Supervisory Patent Examiner, Art Unit 2461